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U. S. Defectors' Cipher, Code Cracking Brains Give Soviets Specialized Reports

By ELTON C. FAY

WASHINGTON (AP) — The Soviets may be expected to use the highly specialized knowledge of the two defected National Security Agency men for help in code-cracking techniques.

This appears probable on the basis of the work done by Bernon F. Mitchell and William H. Martin at the top-secret headquarters of NSA in Ft. Meade, Md.

Two congressional groups are going to look into the defection of the code clerks. A special armed services subcommittee investigating the activities of intelligence agencies will open hearings next Thursday. Witnesses will include Maurice H. Klein, NSA's director of personnel, and Gen. C. P. Cabell, deputy director of the Central Intelligence Agency. The House Committee on Un-American Activities plans another hearing next Friday.

The question of the defectors came up recently when former President Harry S. Truman talked with newsmen on his arrival in New York. Truman said "I think they're a couple of traitors and if we had them back here they ought to be shot. These birds didn't know anything about the security of the country."

There appears to be no belief that Mitchell and Martin took to the Soviets any vital policy or military plans.

The Defense Department said earlier "they had no access to classified information about American weapons or defense plans." And the Pentagon statement also sought to dismiss this point with the comment that "The two men were both junior mathematicians employed in limited areas of communications statistical work."

However, a study of the qualifications needed by mathematicians of their grade is interesting.

They must have mastered "advanced statistical analysis requiring a thorough appraisal of sources of data; skill, judgment and resourcefulness in the selection and use of statistical methods" and possess "a marked ability in the preparation of statistical reports embodying the interpretation and analysis of calculated statistical measures."

For these purposes, they must use electronic computors. Such computors are at the heart of current methods for deciphering and decoding intercepted cryptographic messages. The major function of NSA is to tune in on the cryptographic messages transmitted by Communist radio stations.

The precise procedure used by NSA in setting up computors for code cracking, together with the methods of interpreting the computer's answers, must be of important value to the Soviets.

Perfection of computors has come since World War II. Until then code cracking was laborious too often fruitless. But the electronic "brain" can do it in seconds.

Cryptography is the art of making things difficult. Not only may codes of substitution of letters or numerals be used, but these codes may be prepared from scrambled cipher.

One of the first steps is to find out the number of times a particular code word or symbol appears in a message. With such information the meanings of words begin to emerge.

The art of cipher is centuries old. First it was the mere substitution of letters or words in written communications, perhaps based on beginning the code alphabet at some arbitrarily selected point in the regular alphabet or working out a series of words to represent letters.

But modern wars and diplomacy and international intrigue demanded much more secret methods delivered in much greater volume at much higher speed. So in recent years has come the cryptograph machine, used for transmitting by telegraph or radio, and for decoding.

Some code systems are devised by arranging letters in geometrical design, the unscrambling of which is done by a key to the code.

Some codes are moved in plain language. They are broadcast, without an address or signature, and mean nothing except to a particular receiving point waiting for a prearranged message.

An example was the fake weather report sent "In the clear" by Japan signaling the breaking off of negotiations on Pearl Harbor Day. This "East wind rain" message was intercepted and interpreted, although history shows that full use of the information was not made in the final hours of crisis. A second plain-language code message sent was not interpreted until long after the event: "Climb Mt. Nitaka," which meant begin the attack.